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While surfactants may produce a number of desired properties and benefits, prior usage of articles containing surfactants or having surfactants on the surface of the substrate reveals that surfactants frequently have adverse effects on the properties of the materials and/or surroundings to which the surfactants pass. For example, a surfactant is most commonly applied to a surface of a substrate in anticipation of fluid contact; however, after the surfactant is contacted by a fluid, some or all of the surfactant typically dissolves in the fluid and flows into the substrate with the fluid. The presence of the surfactant in the fluid in the substrate may result in reduced fluid flow (wicking) through the substrate due to reduced fluid surface tension which reduces capillary pressure. That is, if the substrate contains a surfactant the surfactant will enhance the passage of a contacting fluid into the substrate. However, the presence of the surfactant in the fluid reduces the wicking force (speed) and thus the substrate directly under the liquid penetration point can become saturated. This saturation will restrict the passage of more fluid into the substrate which may result in leakage and, an undesirable appearance of the product or even adverse contact with the skin of the wearer. The presence of a superabsorbent in the substrate magnifies the problem. As the surfactant containing fluid is being wicked at a slower rate, the fluid has a longer residency time near the superabsorbent near the fluid entry location into the substrate. These superabsorbent particles continue to swell and absorb fluid which eventually will lead to "gel blocking". More specifically, the phenomenon of gel blocking describes the tendency of hydrogel materials or so-called "superabsorbent materials" to swell in place once wetted and produce gelatinous material which blocks further transmission of the fluid being absorbed. The gelatinous material not only effects the fluid intake or absorption properties of the superabsorbent material, but also inhibits the wicking and dispersion properties of the total absorbent material.

To maximize the utilization of the superabsorbent material in a substrate, it is desirable to have the superabsorbent absorb slowly and the liquid to wick quickly to minimize gel blocking. Both slowing down the superabsorbent absorbency rate and increasing the liquid wicking rate can be accomplished by reducing the active surfactant in the fluid.

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